SIEMENS

MAMMOMAT 1000/3000

SP

Supplement to Wiring Diagrams

Upgrade with AEC kit no. 64 83 783

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General

This supplement is valid for AEC Upgrade kit no. 64 83 783, including D701 (64 47 754 X041E).

The supplement is to be kept together with the Wiring Diagrams for MAMMOMAT 1000/3000.

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Subassembly and PC board overview/Baugruppen und Platinenübersicht

H1	High-voltage generator *Hochspannungserzeuger*
V1-V4	Transistor module *Transistormodul*
C51	Phase shift capacitor for rotary anode *Phasenschieberkondensator für Drehanode*
D700	Back plane board *Rückwand*
D701	AEC board *AEC*
D702	Master board *Master*
D704	Power supply board *Netzteil*
D705	Filament control board *Heizung*
D706	Focus selection board
D710	Inverter board (without V1-V4) *Wechselrichter (ohne V1-V4)*
D711	Power input board *Netzeingang*
D740	Control panel board *Bediendeck*
D741	Power switch board
T1	Transformer for power supply *Transformator für Spannungsversorgung*
T2	Transformer for power supply *Transformator für Spannungsversorgung*
T3	Transformer for power supply of D740
T10	Line voltage transformer *Netzspannungstransformator*
Z1	Mains filter *Netzfilter*
Z2	Mains filter *Netzfilter*
Z3	Transient protection filter

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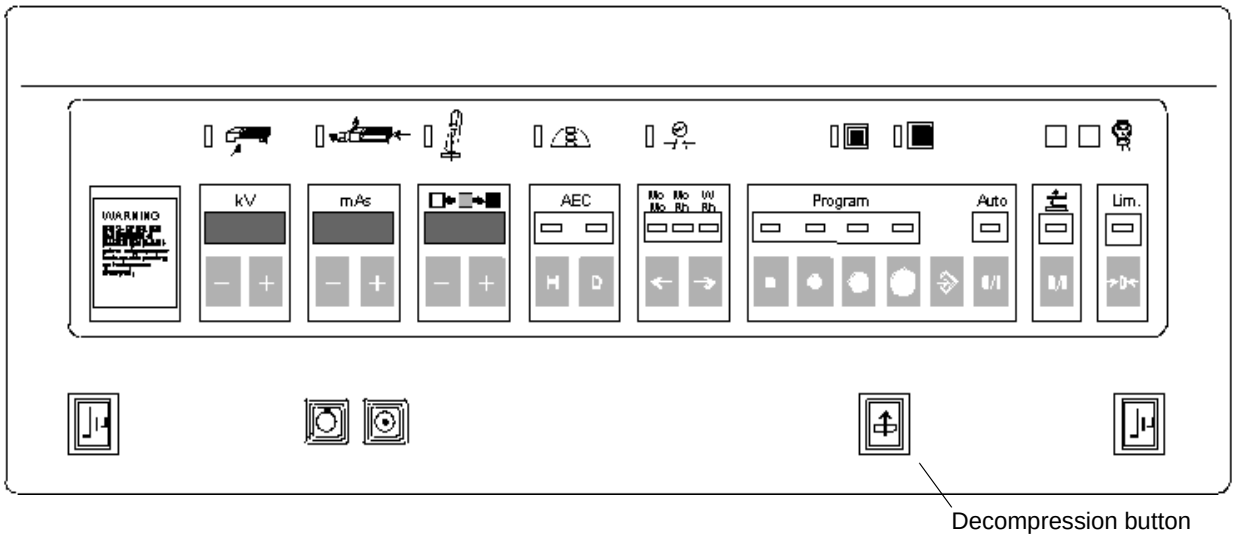


Fig. 1 Separate Control Console

Switches

Switch	Page	Origin	Description
S1	5-11/3D	D701	Test switch for factory use
Reset	5-11/2D	D701	Reset of D701
S1	5-5/2D	D702	UZW OFF/ON ON=Upper position
S2	5-5//2D	D702	SS OFF/ON ON=Upper position
S3	5-5/3D	D702	For service PC connection: ON= Upper position For serial printer connection: OFF=Lower position
S1	5-7/1E	D706	Manual activation of Power aid unit
S1	5-3/2F	D711	System ON (Parallell with D741/S2)
S2	5-3/2F	D711	System OFF (Parallell with D741/S1)
S27A, S27B	5-10/3A	D740	Preparation and exposure release buttons
S1	5-3/2G 5-10/1B	D741	System OFF
S2	5-3/2G 5-10/1B	D741	System ON
S3	3-12/5F	Separate control console	Decompression button

Potentiometers

Potentiometers	Page	Origin	Description
R5	5-7/3D	D706	Adjustment of bias voltage for Molybden (Mo)
R4	5-7/3D	D706	Adjustment of bias voltage for Tungsten (W)
R43	5-5/4D	D702	Adjustment of kV

Component Overview (Generator)/Bauteileübersicht (Generator)

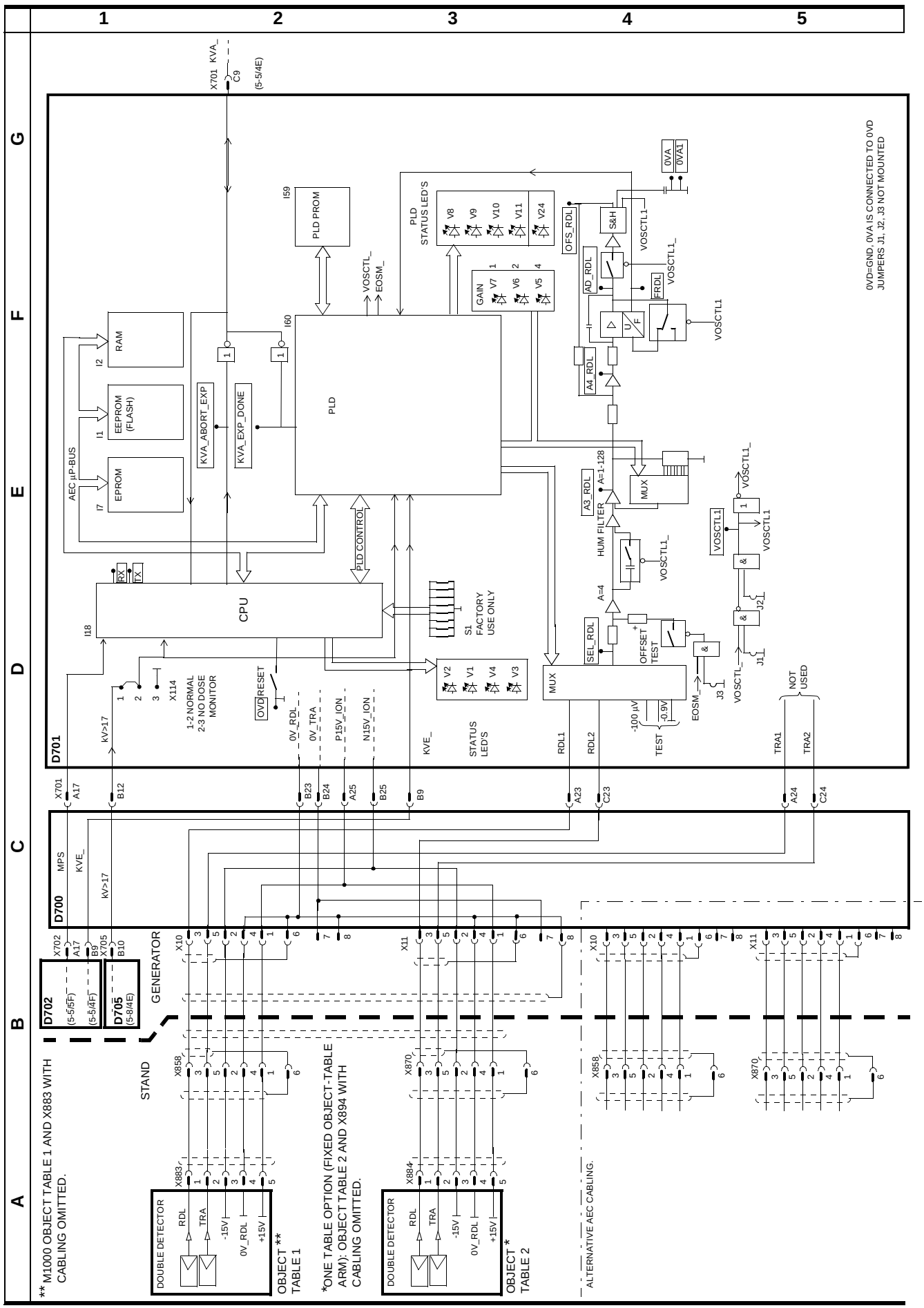
Component	Page	Origin	Description
K1	5-6/3F	D705	Small/large focus changeover *Umschalten kleiner/großer Fokus*
K2	5-8/2D	D705	Inverter frequency changeover *Umschalten der Wechselrichterfrequenz*
K3	5-8/3D	D705	Control for brakes *Ansteuerung für Bremsen*
K1	5-7/3D	D706	MO/W bias voltage changeover
K2	5-7/3D	D706	Connects bias voltage to tube
K3	5-7/4E	D706	MO/W filament current changeover for large focus
K4	5-7/2E	D706	Bias voltage monitoring
K5	5-7/4E	D706	MO/W filament current changeover for small focus
K6	5-7/1D	D706	Relay output for xray indication
K1	5-9/3E	D710	SS relay *SS-Relais*
K2	5-9/1C	D711	By-passes intermediate circuit charging resistors *Überbrückt Zwischenkreis Ladewiderstände*
K3	5-3/2E	D711	Switches on generator and stand *Schaltet Generator und Stativ ein*
K4	5-9/3F	D711	Starting rotary anode *Anlauf Drehanode*
K5	5-9/3F	D711	Starting and braking, rotary anode *Anlauf und Bremsen Drehanode*
K6	5-3/2E	D711	System ON *System EIN*
K7	5-3/2E	D711	System supply OFF *System AUS*
K8	5-6/3C	D711	Filament intermediate circuit ON *Heizungs-Zwischenkreis EIN*
K9	5-6/3C	D711	By-passes charging resistors of the heating *Überbrückt Ladewiderstände Heizung*
K10	5-3/2E	D711	Switches on P24V *Schaltet Trafo P24V ein*
K11	5-9/1B	D711	Intermediate circuit ON *Zwischenkreis EIN*
K12	5-9/1B	D711	Intermediate circuit ON *Zwischenkreis EIN*

Page	Signal name	Origin		Destination	Testpoint	LED
5-5/4F 5-8/2B	KVSOLL	X702.A23	=>	X705.A27	D705.X712 kVref. 1V = 5kV	
5-5/3C 5-8/3D 5-11/1C	KV>17	X705.B10	=>	X702.B12 X701.B12		D705.V39.GE
5-5/3C 5-7/4E	KV>50	X705.C10	=>	X702.C12		D705.V41.GE
5-6/5B	MAIST	D710.X2.22	=>	X705.B28	D705.X707 mAact. 1V = 40mA	
5-5/5C 5-65B	MAIST_CAL	X705.B29	=>	X702.B25		
5-5/3E 5-6/4B	MAREG	X702.B11	=>	X705.B9	D702.X969.MAREG	
5-5/4F 5-6/4B	MASOLL	X.702.B23	=>	X705.B27	D705.X706 mAref. 1V=40mA	
5-5/5E	MPS	MASTER: X702.A17(Master)	<=>	SLAVES: X5.4 (Control Panel) X701.A17 (AEC) X1.2 (Stand)		
5-5/2E	NSE1_	X702.A7	=>	X711.X3.11	D702.X980	
5-5/1E	NSE 2_	X702.B7	=>	D711.X3.7	D702.X981	
5-5/1C	OKT1_	X1.9 STAND	VIA D706	X702.A15		
5-5/1C	OKT2_	X1.8 STAND	VIA D706	X702.B15		
5-5/2C	PH1_	D710.X2.2	=>	X702.A14		
5-11/4D 5-11/4D	RDL_1 RDL_2	X10.3 X11.3	=>	X701.A23 X701.C23	D701.SEL_RDL	
5-5/3E 5-8/4B	RESET_FF_	X702.C11	=>	X705.C9		
5-5/2E 5-8/2E	SS_	X702.A8	=>	X705.A6 D710.X6.1	D702.X983	

"SIGNAL_" = "SIGNAL" is active low

Signal name	Explanations
TRA_1 TRA_2	Not used. *Nicht verwendet.*
U_ANST_	Check if +15V to control the POWER - MOS modules is present. *Überwachung ob +15V zum Ansteuern der POWER MOS - Module vorhanden ist.*
UZIST	Actual value of the inverter intermediate voltage. The LED V24 on board D710 is on at UZ>30V. *Ist - Wert Zwischenkreisspannung Wechselrichter. LED V24 auf D710 ist an bei UZ>30V.*
VH	The stand is informed that the generator has completed its preperation. *Dem Gerät wird mitgeteilt, daß der Generator die Vorbereitung beendet hat.*
WENDEL_	The filament regulator on board D705 is informed which filament is connected. From this results the limitation of IHmax to 5,8A or 8,3A. *Dem Heizungsregler auf D705 wird mitgeteilt welcher Heizfaden angeschlossen ist. Daraus ergibt sich die Bergrenzung von IHmax bis 5,8A oder 8,3A.*
WR_ANST1	Control of POWER - MOS module V1 and V4. *Ansteuerung POWER MOS - Module V1 und V4.*
WR_ANST2	Control of POWER - MOS module V2 and V3. *Ansteuerung POWER MOS - Module V2 und V3.*
WR_AUSTAST_	By exceeding of Imax in the inverter, the inverter control is disabled during 200ms. *Bei Überschreiten von Imax im Wechselrichter wird die Ansteuerung für 200ms unterbrochen.*
ZBL_	The MASTER enables the power section (e. i. inverter) to make preparation. *Der MASTER gibt den Leistungsteil (d. h. Wechselrichter) zu Vorbereitung frei.*
ZK_HEIZ1_	The relay K8 switches the filament intermediate circuit on through damping resistors. *Relais K8 schaltet den Heizungszwischenkreis über Dämpfungswiderstände ein.*
ZK_HEIZ2_	The relay K9 bypasses the damping resistors. *Relais K9 überbrückt die Dämpfungswiderstände.*

PRINCIPLE DIAGRAM, AEC



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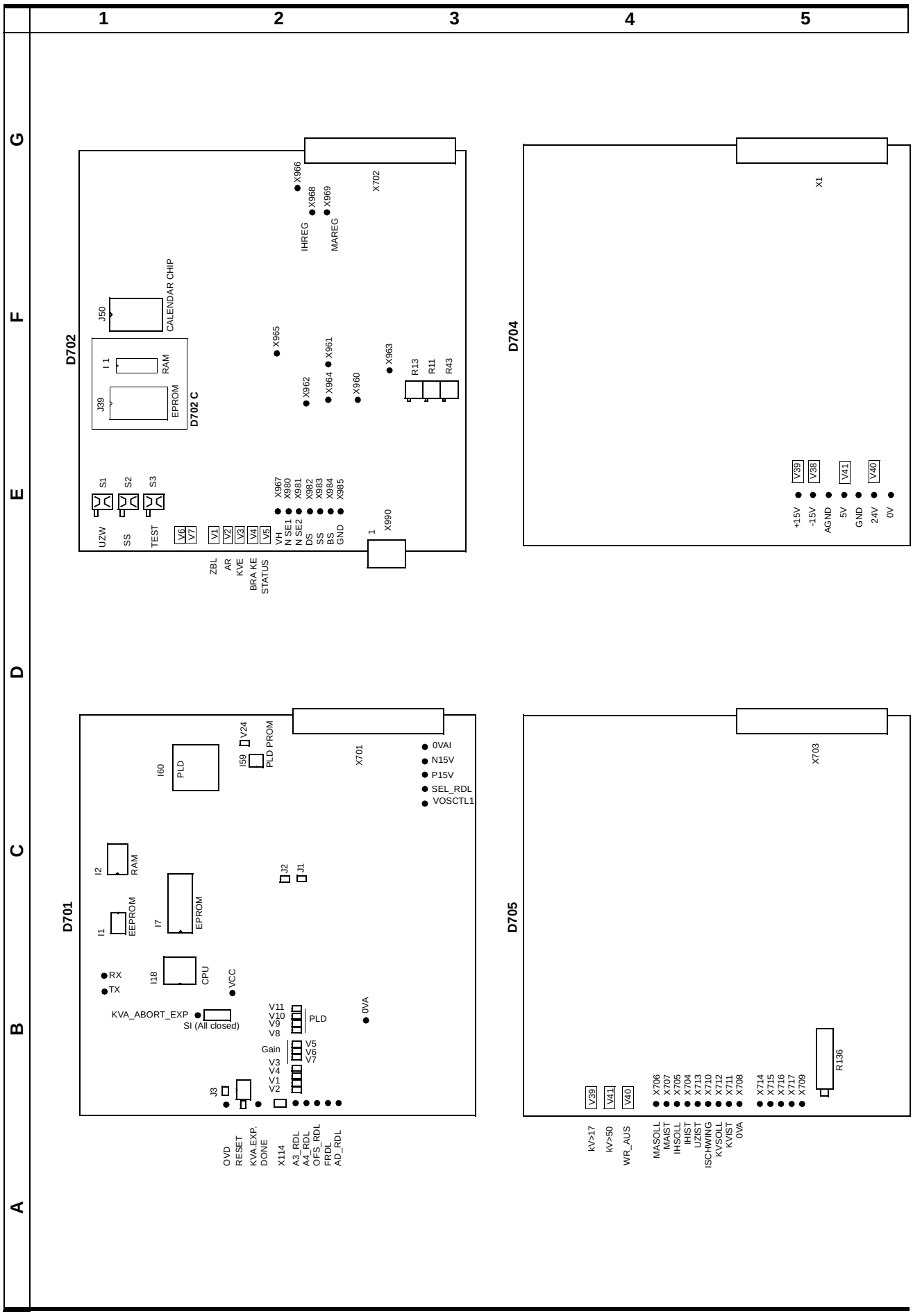

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